

Of the cartridge type recording media as described above, the open type cartridge has come to be employed as mainstream in recent years. On the other hand, the shield type cartridge tends to be less used due to its large thickness and high unit price. Accordingly, it is presumed that the chance for designing and producing a recording medium drive device capable of housing the shield type cartridge will be reduced in the future. However, when the shield type cartridge is inserted by mistake into a recording medium drive device which does not support the shield type cartridge, since the shield type cartridge has larger thickness than that of other cartridges, there is possibility that the shield type cartridge might be stuck inside the recording medium drive device (mechanical lock), which may cause a trouble. Accordingly, it is desirable to provide a recording medium drive device which detects the difference in shape of the cartridge and prevents the insertion of a cartridge having a predetermined shape based on the detected difference in shape.

[0009]

An object of the present invention is, in view of the foregoing disadvantages, to provide a recording medium drive device which can prevent erroneous insertion of different kind of recording medium.

[MEANS FOR SOLVING THE PROBLEMS]

[0010]

A recording medium drive device according to an aspect of the present invention allows, among a plurality of kinds of recording media having different shapes, only a part of the recording media to be inserted therein, the recording medium drive device including: a stopper-restraining-section that detects the difference in shape between the part of the recording media and the other recording media so as to prevent the other recording media from being inserted, the stopper detecting a projection formed on an outer surface of a cartridge in which one of the other recording media is contained.

[BRIEF DESCRIPTION OF DRAWINGS]

[0011]

Fig. 1A is a front view of a shield type cartridge;

[DOCUMENT NAME] CLAIMS

[1] (After correction) A recording medium drive device that allows, among a plurality of kinds of recording media having different shapes, only a part of the recording media to be inserted therein, the recording medium drive device comprising:

5 a restraining sectionstopper that detects the difference in shape between the part of the recording media and the other recording media so as to prevent the other recording media from being inserted, the stopper detecting a projection formed on an outer surface of a cartridge in which one of the other recording media is contained.

[2] (Deleted) ~~The recording medium drive device according to claim 1, wherein~~

10 ~~the restraining section is a stopper that detects a projection formed on an outer surface of a cartridge in which one of the other recording media is contained.~~

[3] (After correction) The recording medium drive device according to claim 1 or 2, wherein

15 the recording medium drive device further comprises a recording medium loading slot through which the part of the recording media can be inserted; and

 the stopper is provided substantially in the vicinity of the center of the recording medium loading slot.

[4] (After correction) The recording medium drive device according to any one of claims 1 to or 3, wherein

20 the stopper comprises a recording medium detector that detects the difference in shape between the part of the recording media and the other recording media, and a stopper body that interlocks with the recording medium detector to prevent the other recording media from being inserted.

[5] The recording medium drive device according to claim 4, further comprising:

25 a rotary shaft that rotatably supports the stopper between the stopper body and the recording medium detector, the stopper body being provided on one side of the rotary shaft, and the recording medium detector being provided on the other side of the rotary shaft.

[6] The recording medium drive device according to claim 5, wherein

the stopper body and the recording medium detector are integrally formed with each other.

[7] The recording medium drive device according to any one of claims 4 to 6, wherein

5 the tip end of the recording medium detector is provided with a roller that abuts on the recording medium so as to rotate.

[8] The recording medium drive device according to any one of claims 4 to 7, wherein

10 the stopper comprises a biasing section that biases the recording medium detector toward a direction in which the recording medium detector abuts on the recording medium.

[9] The recording medium drive device according to claim 8, wherein the biasing section is a torsion bar provided to the rotary shaft.

15 [10] The recording medium drive device according to claim 9, wherein the rotary shaft is respectively provided at two sides of the stopper, and the torsion bar is provided at one end of either rotary shaft.

[11] The recording medium drive device according to any one of claims 5 to 10, wherein

20 the tip end of the stopper body is provided with an insertion preventer that abuts on the other recording media to prevent the other recording media from being inserted.

[12] (After correction) The recording medium drive device according to any one of claim 1 and claims 4-3 to 11, further comprising:

a tray that mounts the recording media.